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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,592	04/13/2001	Yang Ho Moon	2336-063	5640

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Benjamin J. Hauptman
LOWE HAUPTMAN GILMAN & BERNER, LLP
1700 Diagonal Road, Suite 310
Alexandria, VA 22314

EXAMINER

CUEVAS, PEDRO J

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 12/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,592

Applicant(s)

MOON ET AL.

Examiner

Pedro J. Cuevas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2002 and 16 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-16 and 18 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 17 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,293,986 to Kobayashi et al. in view of U.S. Patent No. 5,920,142 to Onishi et al.

Kobayashi et al. disclose the construction of a quartz crystal oscillator, comprising:

an oscillator housing (125 and 126) with a pair of supporting protuberances formed therein;

a conductive adhesive (131 and 132) being spread on the supporting protuberances;

a quartz blank (124) having a supporting part for being bonded, via the conductive adhesive, on the supporting protuberances; and

a cover (126) for being secured upon the quartz blank;

a pair of connecting parts (127, 128) extending from the supporting part; and

a pair of bridge parts extending from the pair of the connecting parts respectively.

However, it fails to disclose insulating layer composed of elastic resin placed between the cover and the supporting part of the quartz blank.

Onishi et al. teach the use of an insulating elastic resin elastic layer (5a), placed between the cover and the supporting part of the quartz blank, for the purpose of providing a space

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retainer for forming a sealed space at the functional portion of the ship which can be sealed and have high moisture resistance, and the process of forming the space retainer can be carried out easily.

It would have been obvious to one skilled in the art at the time the invention was made to use the insulating elastic resin elastic layer disclosed by Onishi et al. on the quartz crystal oscillator disclosed by Kobayashi et al. for the purpose of providing a space retainer for forming a sealed space at the functional portion of the ship which can be sealed and have high moisture resistance, and the process of forming the space retainer can be carried out easily.

3. With regards to claim 17, Kobayashi et al. in view of Onishi et al. disclose a closed space in which the supporting protuberances, the conductive adhesive, the quartz blank and the insulating resin layer are completely disposed within as shown in Figure 9.

Response to Arguments

4. Applicant's arguments filed September 19, 2002 have been fully considered but they are not persuasive.

5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge

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generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Allowable Subject Matter

7. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter.

The prior art of record, taken alone or in combination, fail to teach the construction of a crystal oscillator as disclosed on independent claim 1, wherein the insulating resin layer is formed between, extends along, or partially covers, an entire sides of the supporting part of the quartz blank and side walls of the housing.

9. Claims 7-16 and 18 are allowed.

10. The following is an examiner's statement of reasons for allowance.

The prior art of record, taken alone or in combination, fails to teach the construction of a crystal oscillator and a quartz blank as disclosed on independent claims 7 and 11, wherein an outer longitudinal edge of each of the connecting parts consists of a parallel section which is straightly extended from an outer longitudinal edge of the supporting part and a slant section slanted with respect to an outer longitudinal edge of the bridge part; and a crystal oscillator as disclosed on independent claim 12, wherein an insulating resin layer placed between side walls of the housing and the supporting part of the quartz blank, and is not present between the cover and a top surface of the supporting part of the quartz blank.

Dependent claims 8-10, 13-16, and 18 are considered allowable by their respective dependence on allowed independent claims 7, 11, and 12.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramírez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
December 10, 2002



NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800